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"Cut like a cameo 'gainst the clear morning,
Memory holds Notre Dame to our view.
Glory of sunrise and loyalty's azure
Are her fair colors—the Gold and the Blue."



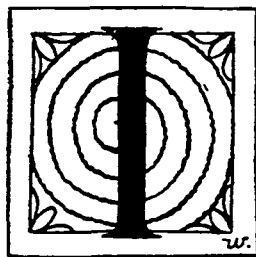
Looking across the College Parterre.

And God of Hevene sende thee grace,
Some goode to lerne in this place.

—Chaucer.

The Gaelic Fragment "Finn."*

PATRICK J. DWAN, A. B., 1900.



IN no country of which we have any account, did the ancient singers or bards exist in such numbers as in Ireland. We find them in the first dawn of legendary history, and the succession was continued down to the latter half of the eighteenth century; even to-day we find some trace of them in the street ballad-singer. However obscure are the annals of the semi-historical period, it is certain that the caste of bards flourished among the Gaels from a very early time and was thoroughly interwoven with their social life. These bards were divided into files, and were in constant attendance upon the chief; celebrated his valor, and sang his personal praises. Surrounded by the *Orsidiagh*, or instrumental musicians, who occupied the place of our modern military band, they watched the progress of their heroes in the battle for the purpose of describing their feats in arms. They composed birthday odes and epithalamiums, roused the spirits of the clansmen with war-songs, and lamented the dead in the cavines or keens, which still exist in the wilder and more primitive portions of the country. Another caste called the Brehon bards, versified the laws and sang them at public gatherings; while a third class, called *Senachies*, preserved the genealogies in a poetic form, kept the records of the times, composed stories and related legends. Lineal descendants of the *Senachies* exist even to-day in the persons of the wandering story-tellers who are always welcome to the peasant's turf fire for the skill and humor with which they repeat the well-worn fairy or historical legend.

The oldest Gaelic poem of whose composition we have any certitude is the *Tain-bo-Cuailgne*, or the "Cattle Spoil of Quelny." This was written about the end of the fifth century. The tone and structure of the language, as well as the manners and customs mentioned in it, indicate its original date with exactness. The great mass of the earlier poems, however, are preserved to us only in the transcripts of the twelfth and thirteenth centuries. Through the exertions of the Royal

Irish Academy and the Irish Archæological Society, these have been collected and translated for us, and form is at last beginning to dawn upon this primitive chaos. Untiring research in the principal European libraries has found many old documents which go to prove that the earlier Gaelic language had a greater force and simplicity than is to be found in redundant and exaggerated forms of our own day.

There is one thing sure, however, that these poems are closely connected in some way, for we find the same heroes running through all. They can not be the production of one man, for the language and customs are of different ages; then they must have been the production of some pre-existing mythology that has changed with each age till at last it is lost to history. The subjects of all these poems are the same as the heroes in McPherson's Ossian. Chief among them are Finn Mac Cuil, or Fion, Gall, Oisín son of Fion, Conan the Bald, Osgur the son of Oisín, Cuchullain and Conor.

It was ever needless to dispute the authorship of these fragments, much less to enter into any party fight and plant the laurel wreath in Ireland in preference to the Lowlands or the Highlands of Scotland. For both these peoples, though very distinct now, were, without the least doubt, at one time a single nation, fighting the same battles and glorying in the same victories. Though social and religious differences now exist between them and help to make the chasm broader, still these ballads shall remain forever as the golden threads that join their past and make them one in history. For, what is the primitive source, the earliest impulse, out of which all poetry has sprung? Is it not some overpowering emanation of the soul, that seeks utterance in words or signs; or some new truth that dawns upon the poet for the first time; or some old truth borne upon him so clearly that he seems the first to have perceived it? In those early times, as well as now, poetic inspiration has been the torrent stream flowing from the deepest and freshest places of the soul, cleaving channels for itself till it found utterance in the simple songs of all nations. Let Ossian be the poet, if you will; let him be blind and the "father of many sons;" let seven cities claim him too, but let none dispute his right as a Gael who sang long before the Irish and the Scotch were. He drew his inspiration from Gaelic chiefs and sang of Gaelic heroes in his songs. We should be proud that he brought the Celtic genius into contact with the nations of modern

* Prize Essay for the English Medal.

Europe and enriched all languages by it. He has created a poetry wholly unlike anything in ancient times; a poetry which is as spontaneous as the singing of the birds; a poetry unknown to books, but which has lived for centuries in the memories of its people.

There are many different versions of these ballads, but the majority depend on a more or less imperfect oral tradition. It is obvious that one written version of the seventeenth century is more likely to yield the original text than a dozen recited versions from the eighteenth and nineteenth, yet the latter is, in many cases, the only base on which we can rest our arguments. Towards the end of the eighteenth century James McPherson made a supposed collection of Gaelic ballads among the Highlands of Scotland. The Irish soon found that they possessed the same legends in their traditions and looked upon the Scottish movement as a plagiarism. In some cases the Irish possessed manuscripts, and consequently proved their right to the poems. A movement was started in both islands to collect all the manuscript possible as well as to commit to writing all the traditions that had any bearing upon them. The consequence is that a search has been made, not only in Ireland and Scotland but all over Europe, and many documents have been found throwing new light on the poetry and history of the Gaels.

All manuscripts that bear date earlier than the tenth century may be divided into two cycles—the Ulthenian which centres round Con Chabbar, a King of Ulster, and the Knights of the Red Branch. These heroes formed a sort of Round Table, and with these is connected a mass of legends comparable to the Arthurian traditions in England. This cycle mainly consists of early prose composition. The second cycle is centred round Finn Mac Cuil. These certainly are the productions of an age when poetry was at its highest; they are full of a melodious melancholy, united to that keen, most painful affection for familiar scenes so characteristic of the Gaelic race. This note, however,—they share with the best of all ballads, for the ballad poetry in every country is strongest in its sorrow.

Of the first cycle the most tragic and at the same time the nearest in approach to the epic is the fragment relating the achievements of Finn Mac Cuil. There is every good reason to suppose that this is in itself a perfect epic, and one going back to the early days of Gaelic history. Throughout the whole poem we have

the tone and glamour of primitive times; and had we no other proof of its antiquity, its present form places it among the compositions of a very remote era. Sidney, in his "Defense of Poetry," divides the history of all nations into four great stages. The first is the life of the hunter, which in time succeeds to that of the shepherd; then we have the farmer, and last of all the merchant. Throughout the "Finn" we find ourselves in the first of these periods. Men live entirely on the fortunes of the chase; there is not the slightest mention made of cattle or pasture still less of agriculture or commerce. Wars are waged because a promise is broken, or a chief was not invited to a feast, or affronted at a tournament. No cities were built, no arts are mentioned: everything presents the simplest and most unimproved manners. The chiefs feasted in a wood beneath an oak tree; the winds played among their locks or whistled through their open chambers; kings chased the wild boars in the forests, and queens prepared the humble repast in the open air or in the caves and sandy reaches of the sea-shore. There is nothing artificial in their customs; everything is natural from beginning to end; the grass of the rock, the flower of the heather, the thistle with its downy cap are the chief ornaments of the *Fiemme*.

The unity of the epic action is distinctly preserved, and in fact this is the first thought which strikes the mind of the reader. It seems to me that it has more unity than the Iliad. All the incidents bear a constant reference to one end—to avenge the death of Cormac, the young King of Erin. No double plot is carried through; all the parts unite into one complete whole. We find, too, a distinct beginning, middle and end. The heroes fight all day, and at night gather round the camp-fire to bewail the death of their comrades, or listen to the grand episodes introduced in the form of songs. Not only is unity of subject maintained, but also that of time and place. The action begins early in the autumn and ends when "the hard dark breezes blow from the north." During all this time the scene of battle is on the moor amid the bogs of Klema. This is undoubtedly the famous Bog of Allen, running from the middle of Tipperary to Dublin Bay.

The poet invokes no muse, but here and there he addresses the seat of the arch-Druids, and this has a greater effect than the invocation of any goddess. Throughout the whole poem there reigns that lofty sentiment, style

and imagery that always show themselves in the great poetic productions of antiquity. Like the Iliad, it does not go back to the early days of the war, but hastens us to the critical moment. Cormac, the young king, is murdered by Caibar, son of a petty king in Atho, now the Province of Connaught. The usurper has called the Danish king, Caribh Mac Starno (Caribh son of Starno), to his assistance. Cuchullain, the guardian of the murdered prince has called Finn Mac Cuil, the king of Morven (now the Province of Munster and a portion of Leinster), to his aid. Before the arrival of the allies, Cuchullain gives battle to the usurper, but is defeated and returns to his cave by the sea-shore and there bewails the loss of his heroes. About this time Finn appears the brave king of "Morven of the storms." Far out on the waters he appears, "the groves of masts nodding by turns on the rolling wave." Caribh too appears on the hills and hastens to stop their landing; but Cuchullain, bending sad and low over his long lance in the cave of Cromla's wood, weeps over the sad fate of his comrades:

How many lie there of my heroes!
The bravest of Erin's brave chiefs!
Cheerful were they at the banquet
When loud 'rose the sound of the shells.
No more shall they walk on the heath;
No more will they shout in the chase.
Silent and pale in their beds
Are the lips of the friends that I loved.
Oh! souls of my wounded companions,
Come, speak to me here in this cave;
Speak in the wind when the rushes
Are rustling on Cromla's loud shore.
Here is the grave of my spirit!
No bard shall bewail my sad fate;
No stone shall bespeak my renown.
Now mourn me dead, O Bragella,
For departed indeed is my fame.

Carril the bard finds the sorrowing chieftain and tells him that his army is rallying again and the ships of Finn are seen on the waters. The soul of the hero is cold within him; he is dead to the entreaties of his friends, and can not be persuaded to join his army till the bard sings the glories of the dead warriors. When Cuchullain appears a mighty shout issues from the surrounding groves and forests, while the Danes retreat in confusion from the sea-shore.

The shadows of evening are falling fast while the bards and heroes gather round the oak fires and recount the glories of the day. Cuchullain is sad, and gazes at the vacant

seats of his heroes; his soul fails within him, and he cries:

Here on the side of fair Cromla
Are the sorrowing heroes of Erin,
Like a grove that the flames have rushed over—
Hurried on by the winds of the night.
Distant and withered and dark are they,
With no leaves to shake in the vale.

Carril takes up the song and tells the glories of Finn, and at the same time introduces one of the most beautiful episodes of the whole poem—the love of Finn and Agandecca, the sister of Caribh. Starno, the king of Lochlin (Scandinavia), invades Ireland; he is accompanied by his son Caribh and his daughter Agandecca, "the loveliest maid that ever heaved a breast of snow." Her arms as white as the foam on the waves; her heart is generous and pure. Peace is declared and Starno invites Finn to Lochlin to hunt the wild boar and woo this young princess. This, however, is a decoy; Starno plots to destroy Finn in the woods during the chase. The young princess overhears the plans of her father, and prompted by her love for the Gaelic chief she discloses her secret to him. Carril describes her beauty as she approaches the shore where Finn and his companions were resting:

In the evening she came, and her beauty
Was a moon from a cloud in the east;
Her steps had the softness of music.
She saw the fair youth and she loved him,
And she was the light of his soul.
Her blue eyes rolled on him in secret,
And she blessed the young chief of the Gaels.

The old king learns that his plans are given away, and in revenge stabs his daughter, who dies in the arms of Finn. A battle ensues, but the bard does not tell us the outcome. Finn returns home with the body of Agandecca and buried her "on Mount Arden where the sea rose round her dwelling."

The morning following the great shield is struck and all prepare for battle. Cuchullain will not yield; he must mourn three days for his heroes, else they will not rest easy in the land of the spirits. In the meantime Finn meets Caribh. Gaul, a young hero, leads the Gaels, and is engaged in single combat with Caribh. The remainder of the Gaels are about to retreat, but Finn sends his bard Carril to awake their spirits with his song. Finn, too, strikes the great shield, and ten thousand warriors rush to the field of battle. Just then Cuchullain and Connal and Conor appear on the brow of the hill overlooking the field of

action. They are about to join in the battle, but a great shout shakes the groves and the rocks on the hillsides—Finn and Caribh meet in single combat:

That was the clash of their arms;
Fast fell their blows as of hammers,
When the iron is white from the furnace.
Fierce is the strife of the chieftains,
Dreadful the look of their eyes.
Cleft are their shields to the centre;
Broken the steels on their helms.
Down dropped their crimson tipped weapons;
Both rush to the other's embrace.
Their sinewy arms are bending,
From side unto side as they turn
And strain the strong limbs of each other.
Now is their pride at the highest!
They shake yonder hills with their heels;
Down fall the rocks from their places,
The green-headed bushes uprooted.

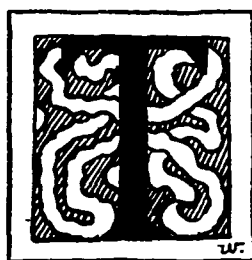
Dead is the strength of proud Caribh—
The king of the groves is in fetters.

Caribh is taken prisoner, while his soldiers retreat in confusion. Finn now gathers his generals in council, and learns that the number of his dead and wounded is very large. Among the slain are his friend Orla, and his son Ryno. This is one of the tenderest passages of the whole poem. Finn weeps for his child Ryno at the same time remembering with tenderness and devotion the lad's mother wailing in the woods of Morven. The sorrow of this grey old man for his child is holy and pure enough to come from the pen of a Christian poet. The passage is too long and will not admit of quotation in this short paper.

(To be Continued.)

Joan of Arc.*

ALFRED J. DU PERIER, LL. B., 1900.



THE notion that an English king was destined to sit upon the throne of France gave rise to the hundred years' war. Victories at Agincourt, Crecy and Poitiers served only to confirm this belief, and with it came England's ambition to conquer the land of Clovis and St. Louis. The task seemed easy. British arms were everywhere successful; blood-drenched battlefields testified that the native armies were no more; the Dauphin Charles was disinherited—France had no king; her cities were burned and sacked; vineyards and harvests were devastated; anarchy ran riot; civil war fomented rancor in every breast; all France was in English hands; Orleans, the last stronghold, was besieged and yielding to starvation. And must France die? Despair makes millions answer "Yes;" Joan of Arc alone says "No."

There is a time in the drama of human life when the entry of a single person may change the destiny of the world. Every illuminated epoch, every golden page of a nation's history, serves only to perpetuate or render dearer the name of some immortal hero. Opportunity has raised up oligarchies, monarchies and republics. It has given to mankind a Cincinnatus, an Alfred and a Washington; and when

the centennial circle had made its fourteenth revolution, opportunity was in France awaiting the touch of some master hand. And who was there to mould and shape it? There was a woman—there was Joan of Arc. Joan was a simple peasant girl of Domremy. From her early days her heart had been moulded in her country's cause. In her tender years she had witnessed all the horrors of war; she had seen merciless bandits spread ruin and desolation throughout her native village; she had nursed her brothers when they came home wounded and bleeding from the field of battle; she had seen France in all its misery, wretchedness and degradation. Silently she brooded over its sad plight. Silently was pity born within her heart—a pity that soon transferred itself to love; a love that grew to be the very basis of her character. But pity, love, faith, and all the other noble qualities of a woman's soul, would have been insufficient to accomplish the great work of saving France; the consciousness that she was an instrument in the hands of God, and that alone, led Joan to leave home and pledge her services,—her very life—in her country's cause, when no power but Divine Providence could have saved it.

Openly she declared her mission, and everyone in Domremy knew of her supernatural calling. She became at once a subject of marvel to the ignorant and of parental study

* Prize Oration—Oratorical Contest, May 30, 1900.

to the reflecting. Between Divine bidding on the one hand and authority on the other Joan's mind was sorely tried. Her inner conscience bade her go to war; her father threatened her with death if she should stir from home. Counselling to seek aid from the captain of the neighboring garrison he receives her with cold indifference and rejects her story; and even many of her bosom friends look upon her with suspicion. But still the words which others could not hear were clear and audible to her: "Joan, go to the assistance of the King of France and restore to him his kingdom." The command was sufficient, and on February 14, 1429, Joan cast aside all self-interest, love of friends and home, and bade farewell to the village of her birth.

Surely the difficulty of her mission called for the noblest fortitude and the fullest confidence in the Divine assurance, for at the court of Chinon, Charles was surrounded by men that were none too honest to sell their country, and none too faithful to compromise its interests. Among the king's bosom friends and most trusted counsellors, Regnauld de Chartres, Raoul de Gaucourt and La Tremouille were of undoubted supremacy. Regnauld was somewhat of a diplomat, and for years he had sought to bring about a reconciliation between the Armagnac and Burgundian forces, and it was with mortal displeasure that he witnessed the entry of the Maid of Domremy into the public life of France. No scheme did this proud man leave untried to defeat Joan and her cause. Raoul de Gaucourt's opposition may be summed up in seven words,—“I will not serve under a woman,”—and for this reason alone he threw every obstacle in the maiden's path that his ingenious mind could devise, even refusing to open the Bourgogne gate on the day of the battle of Orleans.

La Tremouille occupied a most unique position among the king's counsellors. He was at once the chief adviser of the Dauphin and the deepest villain that France has ever known. At a moment when the nation was despondent and despairing, when all hope had vanished into night, this base intriguer could not openly oppose La Pucelle, but secretly he sacrificed honor, duty and principle in order to disgrace Joan and thwart her mission. Under his influence patriotism seemed to have left the land, for the very generals were adverse to her, and the king now looked upon her with suspicion.

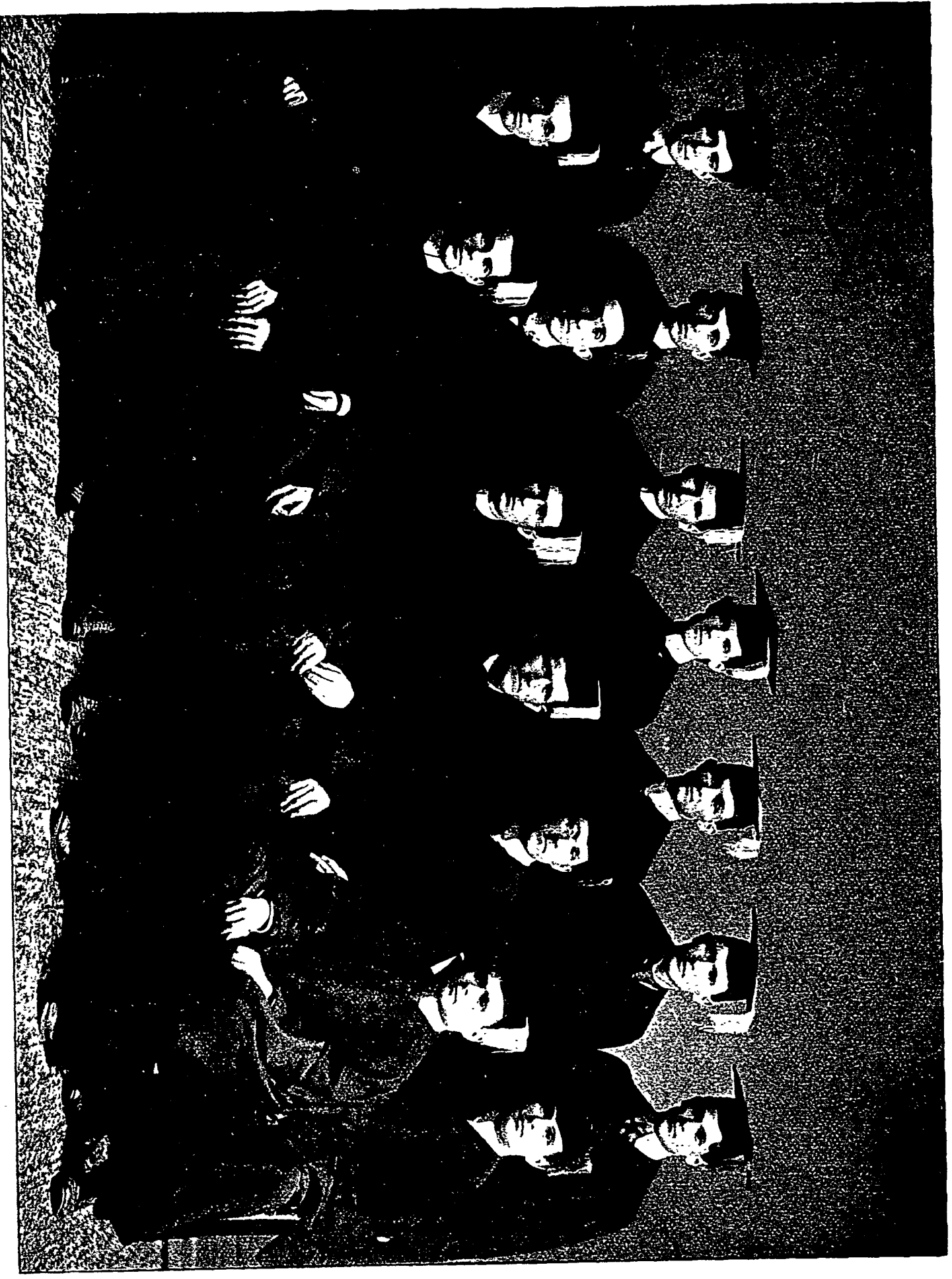
Yet there was a time when things were

different. When the ancestors of these same men watered the deserts of Egypt with their chivalric blood to fight for the glory of the Cross and the honor and dignity of womanhood. And was there ever an occasion for chivalry more than this? A tender Christian maiden far from home and alone would appeal to any heart. They admired fortitude and valor, she was the bravest of the brave; they treasured the banner of the *fleur-de-lis*, she was the lily of grace and virtue; their sires were renowned for patriotism, she had sacrificed the dearest things in life to save her country.

In spite of all opposition Joan saw the king; saw him, convinced him of her mission, and was made the general of his forces. She that knew not how to read her name, now leads her little band against the flower of the English army; she that was accustomed but to sew and spin now directs her artillery with the skill and accuracy of a veteran; she who shuddered at the sight of blood now buckles on the sword and challenges to single combat the bravest leader of the British hosts; she who wept at the suffering of the lowest animal now leads a starving garrison to victory against the heroes of an hundred battles. Oh, Joan, whence came thy power if not from God!

Small was the army entrusted to her care. Its morals were low, its hope was lost, and its enthusiasm dead. An hundred years of disastrous war had robbed them of all confidence, all patriotism. Convinced that their cause was lost they abandoned themselves to vices of every nature. But Joan's presence struck awe into the hearts of the most reckless bandits. Soldiers looked upon her as a saint and officers respected and obeyed her. At her command cards and dice were thrown into the flames; instruments of sorcery were broken up, and women of bad life were driven from the camps. So sweeping was the reform that the redoubtable La Hire himself agreed to compromise his profanity and swear only by his staff.

There was now no time to lose, famine reigned in Orleans, and everyone within its walls was crying for deliverance. Joan's forces were moving along the southern banks of the Loire; all eyes were watching their progress; all hope was centred in their fate. The garrison was filled with joy at the approach of their deliverer, but Joan was sad. She saw tender mothers clasping their starving infants; she saw grey-haired men weep for happiness, everywhere she saw the wounded, dead and dying. But these sights only made her all the



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more determined in her purpose, knowing that her mission was from God.

Joan's one purpose was to drive the enemy from Orleans and crown the king at Rheims. Accordingly she resolved to attack the menacing peril of her city,—the Bastille of the Tourelles. At day-break on the morning of May the seventh, Joan summoned Gaucourt to open the gate of Bourgogne. He refused, and the impatient army forced it from its hinges. Soon their boats covered the bosom of the Loire, Joan and La Hire dragging their horses after them. No time was lost in making the assault, and La Pucelle valiantly led her men against the Tourelles. Furious was the defense; furious the attack. Bravely did Joan advance even to the very ramparts of the enemy. But just as fortune seemed to favor her, she was struck down by an arrow. Soldiers and chieftains were seized with fear and consternation. They wavered. Is the cause lost? Has the leader fallen? No. As Joan snatches the arrow from her quivering flesh and cries, "In God's name take courage!" the soldiers catch sight of their bleeding heroine and rush back to the encounter. Once more Joan is in the lead. Again her banner strikes the boulevard. The soldiers leap over walls, trenches and the very ramparts. The attack is irresistible. The Bastille is taken. The victors of Poitiers, Crecy and Agincourt turn and fly. As the golden rays of the setting sun shine over that scene of carnage, England's prestige has fallen. Joan's star is in the ascendant. The first part of her mission is accomplished—Orleans is saved.

After the battle of Orleans, victory upon victory greeted her banner until the gates of Rheims opened to receive the Dauphin and his deliverer. And there on the morning of July the seventeenth, fourteen-hundred and twenty-nine, amid the acclamations of a ransomed people, Joan saw the crown of France placed upon the head of Charles. It was then that she felt that her mission was accomplished, and as she stood beside the king in her knightly armor, she sought not the applause of the multitude; she sought no reward of her people. Like another Cincinnatus she only begged to return to her peasant home; but this happiness was denied her, and she still remained with the king even to her defeat at Paris and her capture at Compiègne by the Burgundians. Sold to the enemy by her countrymen, and abandoned by those she led to victory, she might well bewail the treachery

of Luxemburg and the ingratitude of her people. She who had done so much for Charles was now abandoned by him to the tortures of her enemies. Left to be insulted by the English soldiery; left to be tried as a sorceress, a heretic and an impostor, and sentenced to death. There were no witnesses to testify in her favor; no jury to try her cause; no counsel to defend her; no judge to give her justice. But there was prejudice that would have prevailed against the will of millions, and Joan was sentenced like a traitor and burned alive at the stake.

Joan was a savior in the fullest sense of the word. That she received her knowledge and her mission direct from heaven can in nowise lessen her claim. For who will attribute the appearance of great men at crucial moments in a nation's history to the mere caprice of fortune? Did not Atilla call himself the scourge of God when he overran the Roman Empire; and has not history verified his statement? Was not Alexander the Great foretold by the Hebrew prophets hundreds of years before Philip, his father, sat upon the throne of Macedon? And at different epochs have not Deborah, Esther and Judith been called the saviors of Israel even though their mission was like Joan's direct from God?

But regardless of the source of her wisdom and power, Joan stands out as the ideal personality of that and all succeeding ages. Gentle as a child; dignified and fearless in war; prudent and wise in counsel; marshalling her forces with the skill of a Napoleon; leading her army with the dash of a Sheridan; helping the wounded with the tenderness of a mother, she is at once the statesman, the warrior, the woman, the saint, the martyr-patriot.

The martyr-patriot. What deep significance is hidden in those words; what memories do they not recall! They tell us of all Joan did and suffered for her country; of the tragedy of Rouen; of the base sentence of a Bedford and a Winchester; of the mockery of English justice that, tiger-like, would not be satisfied until Joan's body was burned, until sulphur and oil were poured upon flames, and her ashes cast into the Seine; they tell us of a life of sacrifice, of duty and of love; of the Christian fortitude with which she suffered death; tell us how every English soldier was driven from the land of France, and how that nation rose to eminence by her valor and was unified by her blood.

History records the names of others who

have saved their country, but seldom does it record that of a woman. When have its pages revealed to us one whose character was so exalted; whose sincerity was more evident; whose fame was more enduring; whose sacrifices were greater, and yet whose efforts were rewarded with so much ingratitude as Joan of Arc's? Judith saved Israel from the hand of Holofernes and lived to enjoy the gratitude of her people; Charles Martel with a brave and disciplined army broke the power of the Mohammedans in Western Europe; Bismark succeeded in unifying Germany, but he merely anticipated the inevitable and shrewdly took advantage of favorable conditions; Washington lived to be called the "Father of his Country," and led to victory a people yearning to be free; Lincoln was a savior, but he saved the Union by the mere force of numbers; Richelieu saved France from the machinations of Spain and Austria, and unified the nation amid the tears and blood of her noblest sons; but Joan saved and unified her country by shedding her own blood, and her name will ever be venerated when Richelieu's and Bismark's are forgotten; she led to victory a small army whose enthusiasm was dead and whose patriotism was a by-word; she came without military experience and found no discipline in her soldiers, no confidence in those she was to save; she met with naught but opposition

from her generals, while she vanquished the English at the height of their power; she received naught but ingratitude from her people, and died forsaken at the stake. And was there no tender heart to console her in that moment of suffering; was there none to befriend her in that hour of need?

Angels were Joan's companions in the days of her military glory. Does no angel come in that awful moment to sweeten her cup of bitterness? Does he tell her of the glory that is to come to art, literature, Christianity and civilization from a resuscitated France? Does he tell her how one day a young republic in the West, a home for the oppressed of all nations, will march to victory, aided by a Rochambeau and a Lafayette, against the same enemy of human liberty at whose hands she now suffered? Or does he tell her of the still nobler achievements of French missionaries, carrying the light of God's grace to the millions that walk in the shadow of the valley of death? We do not know. We only know that she died for speaking the truth—a martyr to her cause, her country and her God. Oh, Joan! in the ages that are gone none have been found like you; and in the ages yet to come wherever patriotism is prized and Christian fortitude admired, dearest forever to the hearts of chivalry be the world's greatest heroine—Joan of Arc of Domremy—Maid of Orleans.

An Investigation on the Composition of Commercial Calcium Carbide.

JOHN W. FORBING, B. S. 1900.



AMONG the many interesting compounds which the electric furnace with its high temperatures is revealing to the world, calcium carbide claims much of the attention at present; and this interest is aroused not only because of its commercial usefulness, but its chemical value also. Though Moissan and others have examined it, yet there are many compounds existing in it as impurities that furnish much to the analyst for study and research. With a view to determining the composition of the commercial product as obtained on the market, I took up the following piece of work some time before the appearance of Moissan's article

in Vol. XVIII., Series 7, of the "Annales de Chimie et de Physique."

The ordinary process for producing calcium carbide is that of subjecting an intimate mixture of charcoal or coke and limestone to the intense heat of the electric furnace. The resulting carbide is by no means one hundred per cent. CaC_2 . The limestone contains, besides the metal calcium, a rather high percentage of magnesium, along with considerable quantities of iron, aluminium and silicon. In coke and wood charcoal are encountered silicon, iron, aluminium, magnesium, sodium, potassium, manganese, and the metalloids, sulphur and phosphorous. It may be readily deduced that compounds of these foreign elements are

formed with each other together with the carbide in the high heat of the furnace.

In appearance the carbide is crystalline, reddish brown to black, and shining. It is remarkably hard, which fact, along with that of its being quickly decomposed in the ordinary atmosphere, due to the presence of aqueous vapor, renders pulverization for analysis very difficult. For the writer's experiments a large piece of the carbide was selected, quickly transferred to a clean, dry iron mortar, and reduced to small lumps, the weight of each averaging about .01 gm. These were placed in a glass-stoppered bottle and set aside for analysis.

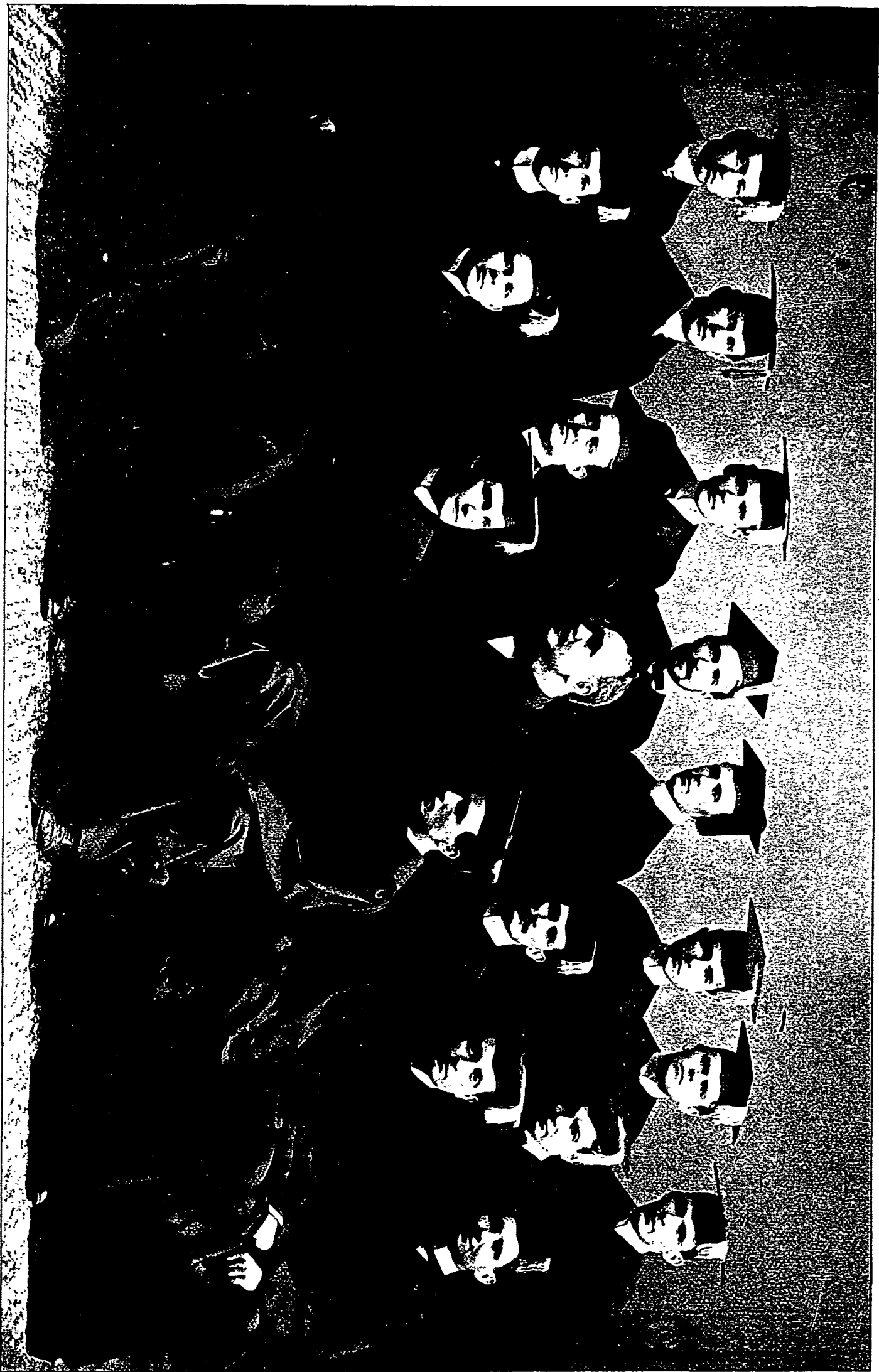
The result of a qualitative analysis of the residue left after decomposition of a small portion of the sample with water showed the presence of, besides calcium, graphite, uncombined carbon, magnesium, silicon, aluminium, iron, manganese, potassium, sodium, sulphur, and a trace of phosphorous. The quantities and combinations in which these elements are found are of much interest. On decomposing the carbide with water, there remains after the evolution of acetylene, calcium, magnesium and aluminium hydroxides, floating black particles of graphite and uncombined carbon, bright shining laminæ of iron silicide, and, mixed with the sediment of hydrates, the other mentioned metals with sulphur, carbon, and silicon in various combinations.

To facilitate the study of this residue, a few grams of the carbide were decomposed by a solution of sugar, then the whole filtered in order to eliminate the hydroxides of calcium and magnesium. The residue was washed with water, alcohol, and finally with ether, then dried. This residue is seen to be made up of black particles of graphite and uncombined carbon mixed with a white powder and the previously mentioned laminæ of iron silicide. Upon a more careful examination made by spreading the residue on a piece of white paper, small globules of a yellow metallic appearance were isolated. A microscopical examination of these globules was made with the Zeiss instrument. The globules and the heavy gritty matter were obtained in sufficient quantity for examination by decomposing 100 gms. of the carbide with an excess of water, and treating the residue with dilute hydrochloric acid. On adding the acid, hydrogen sulphide is set free from the sulphides in considerable quantity. The solution was then agitated to suspend the lighter portion of

graphite, uncombined carbon, and laminæ of iron silicide, thus enabling me to get rid of all but traces of these substances by repeated decantation. The weight of the residue obtained in this manner was .5446 gms. This residue was made up mostly of the globules which were found in all sizes from those measuring 4 mm. in diameter to those so small as to be seen with the microscope only. By some investigators these globules have been claimed to be iron silicide. A peculiar thing presented itself in the fact that some of the globules were attracted by a magnet, while others, having the same appearance, were not in the least affected by it. This fact enabled me to separate .4448 grms. of globules and metallic looking particles from the .5446 grms. The sp. gr. of this portion of the residue gave in two determinations 5.46 and 5.228. When viewed whole under the microscope, the surface of the globules appears metallic with the colors of iron sulphide, uneven and acicular. They are very brittle and easily broken up in a glass mortar. Considered as a whole they appear crystalline, but no definite form could be ascribed to them. They enclose a few hexagonal crystals of graphite almost perfect. A few crystals of cubical iron silicide also appeared.

From the microscopical appearance of the globules, and their physical and chemical properties, I am led to believe they contain traces of phosphorous and manganese, and a mixture of iron silicon, iron sulphide, and silicide, enclosing a small quantity of graphite. Part of the iron goes into solution when heated with nitric acid. The globules are with difficulty soluble in hydrofluoric acid and sulphuric acid. Digestion for eight hours in a mixture of these two acids failed to dissolve them completely. They are more readily attacked by a mixture of hydrofluoric and nitric acids. They are also partly soluble in potassium hydroxide and on fusion with the carbonates of sodium and potassium. The greater part of the portion of the residue not attracted by the magnet consists mostly of iron sulphide, silicide and carbide. The silicide is found both in the crystalline and the amorphous form.

With the paraboloid, poorly crystallized particles of silicon dioxide of a peculiar milky appearance, resembling somewhat the Alaskan diamond, were easily recognized, isolated and chemically identified. Hexagonal crystals of silicates and silicides of carbon were also seen.



LAW CLASS 1900.

Some of the latter present a very beautiful appearance. The most prominent ones are colored a fine deep blue, dark green and violet. Crystals of calcium silicate were also seen.

A complete elementary analysis of the carbide gave as a mean of several determinations the following:

Calcium.....	56.2500 %
Magnesium.....	2.1450 "
Silicon.....	1.4830 "
Iron.....	.5660 "
Aluminium.....	.7335 "
Potassium.....	.0730 "
Sodium.....	.0510 "
Manganese.....	.0125 "
Phosphorous.....	.0206 "
Sulphur.....	1.3065 "
Graphite and uncombined carbon	1.9613 "
Combined carbon (by difference)	35.3976 "

100.

Tests showed the absence of sulphates, chlorides and phosphates. The sulphur is present as the sulphides of calcium, aluminium, sodium and potassium. The total amount of sulphur present was determined by decomposing 1 gm. of the carbide with a small quantity of a moderately strong solution of potassium hydroxide. The resulting solution was evaporated to dryness, and the residue decomposed with a mixture of sodium nitrate and sodium carbonate, taken up with water filtered and acidulated with hydrochloric acid. The sulphur in the latter solution was determined in the usual manner by precipitation with barium chloride. The sulphur remaining in the residue after decomposition of the carbide with water was thus determined:

Five grams of the carbide were treated with a sufficient amount of water in a porcelain mortar to bring about complete reaction. The mortar and contents were transferred to a water-bath and evaporated to dryness. The residue was then mixed with 1 gm. calcined magnesia, free from sulphur, and .5 gms. of a mixture of potassium carbonate and sodium carbonate. This mass was heated to redness in a platinum crucible, cooled and intimately mixed with about 1 gm. of finely powdered ammonium nitrate. The crucible and contents were again heated to a dull redness, and the heat maintained until all the ammonium nitrate was decomposed. The resulting sulphates were extracted with hydrochloric acid and the sulphur determined in the usual manner. This sulphur is considerably lower

than the total sulphur obtained in the former process as a comparison of the two will show:

Total sulphur.....	1.3065 %
Sulphur in residue.....	.9180 "

Difference..... .3885 "

This difference represents the amount of sulphur that has been set free from the aluminium sulphide, as hydrogen sulphide, to enter into the composition of the disengaged gas. The amount of calcium as sulphide and as hydrate, resulting from the decomposition of the carbide and phosphide of calcium, along with the sulphur of the soluble sulphides of sodium and potassium, were determined by the following process:

1 gm. of the carbide was decomposed with the least possible quantity of water freed from carbonic acid by boiling. The remaining residue was then digested with sugar water, also free from carbonic acid and filtered. The filtrate was divided into two portions.

For the sulphur, one portion was treated with a solution of lead nitrate made alkaline with potassium hydroxide. The resulting solution containing the black precipitate of sulphide was filtered, and the sulphide well washed with water. The filter and contents, while still moist, were then thrown into a beaker in which had been placed just a moment previous some powdered potassium chlorate, and about 15 c. c. strong hydrochloric acid. The solution was allowed to stand in a warm place until most of the fumes had passed off. Twice its volume of hot water was added, and the solution then filtered. The filter was washed with hot water, and the filtrate heated to boiling and ammonia added until the solution was slightly alkaline to litmus-paper. After acidulating with hydrochloric acid, the sulphates thus obtained were precipitated with barium chloride, the barium sulphate estimated multiplied by two and calculated to sulphur. The mean of three such determinations gave .2003 % sulphur.

To estimate the calcium in the remaining portion, the sugar solution was treated with a sufficient quantity of hydrochloric acid to convert the sulphides and hydroxides into chlorides. The calcium and magnesium were separated and estimated by adding ammonium chloride, precipitating the calcium with ammonium oxalate, and subsequently the magnesium with disodic hydric phosphate. The mean percentage of calcium and magnesium in two determinations of each was as follows:

Calcium..... 55.696 %
Magnesium..... 2.145 "

The fact that when the sugar solution obtained by the above means is treated with hydrochloric acid hydrogen sulphide was liberated, furnishes additional proof of the sulphur present as the sulphides of calcium, sodium and potassium, all of the two latter entering into the solution.

On account of the extreme instability of magnesium carbide, its presence as a sucrate can not be doubted, and we have reason to think that the calcium obtained from the sugar solution represents the calcium as combined with the soluble sulphur, minus the sulphur in combination with the sodium and potassium, the remaining calcium being calcium as hydrate, or sucrate, resulting from the decom-

.138 % sulphur as soluble calcium sulphide equals .3105 % calcium sulphide containing .1725 % calcium.

Calcium as carbide, phosphide and soluble sulphide..... 55.6960 %
Calcium as soluble sulphide..... .1725 "

Calcium as phosphide and carbide 55.5235 "

The amount of phosphorous remaining in the residue after decomposition of the carbide with water being but a trace, I accepted the mean of the analysis made by Lunge and Cedercreutz for the amount of hydrogen phosphide in the gas produced by the carbide. The hydrogen phosphide was calculated to phosphorous. According to the above authority in the gas produced by 100 gms. of carbide there is .22 gm. of hydrogen phosphide.



A GROUP OF PHARMACISTS.

position of calcium carbide and phosphide. The percentage of magnesium in sugar solution as magnesium hydrate, the result of the decomposition of magnesium carbide, represents all the traces of that metal present in the carbide.

CALCULATIONS.

Total calcium extracted by nitric and hydrochloric acids..... 56.250 %
Calcium as carbide, phosphide and soluble sulphide..... 55.696 "
Calcium as insoluble sulphide..... .554 "
Sulphur as soluble sulphides..... .2003 %
Sulphur as potassium and sodium sulphides..... .0623 "
Soluble sulphur as calcium sulphide .1380 "

.022 % of hydrogen phosphide equals .0588 % calcium phosphide.

.0588 % calcium phosphide contains .0387 % calcium.

Calcium as carbide and phosphide 55.5235 %
Calcium as phosphide..... .0387 "

Calcium as carbide..... 55.4848 "
55.4848 % calcium equals 88.776 % calcium carbide containing 33.292 % combined carbon.

We have now to calculate the magnesium to carbide, and we have accounted for the sugar solution.

2.145 % magnesium equals 4.290 % magnesium carbide containing 2.145 % combined carbon.

hydrochloric acid and filtering. The manganese in the filtrate was then determined according to Blair's "Acetate Method."

RESUME.

Calcium carbide	88.7760 %
Calcium phosphide.....	.0588 "
Calcium sulphide.....	1.3075 "
Magnesium carbide.....	4.2900 "
Iron sulphide.....	.7554 "
Potassium sulphide.....	.1030 "
Sodium sulphide.....	.0866 "
Aluminium sulphide.....	.6070 "
Iron, metallic, as silicide and carbide	.0853 "
Aluminium silicide.....	1.0680 "
Silicon, metallic, carbide and....	
silicides.....	.9300 "
Graphite and uncombined carbon	1.9613 "

1 gm. of the carbide of the above composition when treated with water would produce, theoretically, 314.52 c.c. of gas, weighing .3881 gms.

I GM. CARBIDE.

c.c. gms.

Calcium carbide	309.75	.3606	Acetylene
Magnesium carbide	1.99	.0232	Acetylene
Aluminium sulphide	2.71	.0041	Hydro. sulph.
Calcium phosphide	.075	.0002	Hydro. phos.
	314.52	.3881	

In three practical determinations made by the author one gm. of carbide gave the following volumes (reduced to standard conditions) and their corresponding weights:

	I	II	III
Volume	309.1	310.7	312.0
Weight in gms.	.3865	.3842	.3894

The difference between the theoretical amounts and those found, I believe to be undoubtedly due to the apparatus used in their determination.

Between Sea and Sunshine.

PATRICK J. McDONOUGH.

AN excursion steamer spanned by rainbows of bunting is hurrying down New York harbor. The decks, jammed with holiday seekers, remind one of the crowded galleries in a theatre. The scene is impressively grand. In our wake the statue of Liberty, serene and calm, looks out on the deep like a complacent mother. The free outlines of the lofty buildings on lower Broadway suggest the gigantic palace of some fairy tale. Farther in the distance is Brooklyn Bridge. Its huge cables and girders resemble the network of a spider's web. The waters of the bay glisten in the sunlight, and the waves sweep along in graceful ridges. We can almost hear their joyous laugh as they disport themselves on the Staten Island shore.

On the promenade deck the orchestra is playing, and what an effect the first strains produce. Joy is depicted on the faces of many, while a few here and there look as if they were listening to the Loreleian chant. The music does not lack variety, whatever else may be said of it.

The Greek boy has almost sold his stock of cut flowers. Only a few white roses remain. As he approaches the companion way, his eyes sparkle. He has found a purchaser. A swarthy Italian buys the flowers and proudly presents them to his youthful looking wife. She accepts them with a smile, and a flush crimsones her

cheeks. Those seated near witness the incident and all appear to appreciate it.

Opposite the Italian is a countryman of his own, a priest. He is a man past middle age, and as he bends over his breviary there is a look of peace and resignation on his face. His clothes are frayed and sunburned, for what little he receives is distributed in charity. Many a day has he labored among his people in Roosevelt and Mulberry streets. Little wonder that they love him.

He leans his camp chair against the bulwark. The heat is sweltering, and due perhaps to its somnific influence as well as to fatigue he begins to doze. Suddenly the breviary drops on the deck. The young woman who received the roses stoops and recovers the book. The priest thanks her and a brief conversation follows in which her husband joins. She laughingly extends her hand and exhibits the marriage ring. Then both she and her husband kneel to receive the priest's blessing. In bestowing it, the priest points to the flowers and to the ocean, and prays that their affection may be as boundless as the one and as pure as the other.

The siren whistles. The steamer reaches the pier, and we crowd over the gang-plank with the memory of the preceding incident as a happy prelude to the day's enjoyment.

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The Coming Year.

AN optimistic tone at the opening of each new school year has become, under the blessing of God, habitual at Notre Dame. Each succeeding September has found the University with increased courage, brighter prospects, and in every way better prepared for its work in the cause of Catholic education.

The present year is no exception. Whether one considers the intellectual or the material side of the University—the courses and the teaching staff, or the equipment of laboratories, the erection of new buildings, etc.—the growth of Notre Dame within recent years has been so rapid that a detailed statement of the midsummer activities is no longer possible. It is enough to say that the hottest, the busiest and the noisiest months at Notre Dame are July and August.

About three weeks hence class-work will be resumed and, if the usual signs are to be trusted, with an unusually large enrollment of students. Practically, all the old boys will return, and we understand that the President's mail has been exceptionally heavy with applications from new men. The capacity of the dormitories—Sorin and Corby Halls—will be taxed to their utmost. It is not unlikely that an overflow may make a new dormitory necessary.

And now a word of advice. Every man who went home last June ought to form two strong resolutions: to return early, and to return with a hunger for work. A late return or an indolent spirit means a low grade of student scholarship and at a time when *Alma Mater* is advancing by leaps and bounds it will not do for her children to hang back, to hinder her, to clog her progress. In a school where classes mean something no student can delay his return till a week after lectures are resumed without feeling the worse for it the whole year through. Therefore an early return, an earnest spirit and may God bless us all, Tiny Tim said.

About Mental Athletics.

CULTURE is a pretty general word; it may mean much—usually it means little. There is, however, such a state as culture. It was concerning its possession that Matthew Arnold wrote so enthusiastically; concerning its general lack that he wrote so biting. He summed up the non-possession of it in one word, and applied that word to everyone who affected to despise culture, or who did not seek to attain it—Philistine.

Arnold may have gone a little too far in his generalizations—most reformers do. He may have been a little too severe in his denunciations; for the verbal lash, although for the most part delightfully used, was an effective weapon in his wielding, and he rarely hesitated to scourge black as *black*; at any rate, his crusade against Philistinism has not been unsuccessful. One may not hear the stock words—*culture*, *philistine*—so often now as twenty years since, but the ideas for which they stand are pretty generally possessed. Most men, I think, will grant that culture is earnestly striven for to-day because its possession does much to make a man broad—broad in his ideas, broad in his treatment of his fellows, broad in his soul.

CULTURE IN GENERAL.

Culture may be roughly set forth as a general and sympathetic knowledge of the arts and sciences. It is opposed to narrow-mindedness, which is sometimes eulogized as "singleness of purpose," and also to pedantry, which often permits a man to put himself on a pedestal and let a few enthusiastic admirers herald him as "the great I am." Culture is toleration; and toleration is responsible for much of our present civilization.

Unfortunately culture is difficult to attain. There is no mystery about its abiding place, no esoteric rites attending its possession, nothing whatever out of the common; yet a man may attend the lecture courses in a university for a half score years and leave the institution without a suggestion of culture. It is not in the catalogue or syllabus as part of any series of lectures; and yet the student who places his mind in the proper attitude is pretty apt to find it whether he be taking a course in Surveying, in Mechanics, in Sanskrit, or in English Literature. No one, it is true, feels the same amount of interest in every subject,

and a Civil Engineer may take more pleasure in reading a description of the laying of a road-bed in the Andes than in reading the life of Chopin. But if he knows something of the history of Chopin, even though he does not understand music, and if he sympathizes with the desire of the great musician—then he has widened his plane of enjoyment, widened his knowledge of humanity, widened his usefulness, widened his life.

There are two evident ways in which one may secure some part of this general knowledge, this culture: by reading, and by listening to those competent to speak on living subjects. The latter is, perhaps, the more satisfactory way of acquiring information. The individuality of the speaker, the advantages of spoken over written discourse, make impressions more lasting than those one gets from reading. Besides, the average student will attend a lecture, let the subject be what it may, if he knows the lecturer is an authority on the subject to be discussed, or if there are stereopticon views to render more vivid the word pictures of the lecturer.

LECTURES.

With a desire to interest students in subjects other than those in the courses they were taking, a series of lectures was arranged during the year just closed that was as successful as it was varied. These lectures were given during the day or evening at times when there was no collegiate work to interfere with the attendance of any student. The diversity of subjects treated insured something of especial interest for everyone. At least, so one would judge

after reading the following list: An illustrated lecture about Manila; lectures on music; lectures on art; a lecture about Cardinal Newman; an illustrated lecture about Tissot; a lecture about Dante; one about the German statesman, Windhorst; a lecture about Sir Thomas More. The names of such well-known lecturers as Archbishop Keane, Bishops O'Gorman and Glennon, Henry Austin Adams, Eliza Allen Starr, Cleveland Moffett, Burton Holmes, were sufficient to insure interested audiences no matter what subjects were treated; and in each

instance expectations were more than realized.

Three of the forms of art—music, poetry, and painting—were dealt with in these lectures. The speakers are men who have devoted themselves to acquiring a full knowledge of their subject, and therefore speak so enthusiastically and acutely that their very zeal often begets an enthusiasm that leads the student to individual study.

An example in point was Henry Austin Adams' lecture on Sir Thomas More. The personality of the lecturer and his ardent admiration for the great Chancellor aroused the

imaginative faculty in every auditor, and More, freed of the musty odor of the past, stood forth a great man, full of nineteenth century vigor; ever ready with a merry quip, yet staunch in his faith; daring to denounce the iniquitous policy of Henry the Eighth, and unhesitatingly sealing his convictions with his life. In one short hour Mr. Adams took us to sixteenth century England, introduced us to her powerful monarch, led us for a quiet stroll by Chelsea, where we conversed with



THE VERY REV. PRESIDENT MORRISSEY, C. S. C.

Sir Thomas, showed us the dark recesses of the bloody Tower, and let us have a parting word with More in the shadow of the block. A week spent with Macaulay and Froude and Green could not make one *feel* what Mr. Adams made us feel in an hour. He bred in us a sympathy for More that will always be real and vivid; Henry the Eighth's England grew into actual existence, definite in its characters, its ambitions, its heroes. The lecture carried on it the stamp of culture—a broad man broadly treated. In becoming acquainted with Sir Thomas More of the sixteenth century, we became acquainted with Henry Austin Adams of the nineteenth century—a man of charming personality and of *conviction*.

THE DRAMA.

Nothing moves us so strongly as what we feel. If we do anything strenuously it is because we feel it deeply. For this reason any intellectual treat is the more prized if it has in it something that appeals to the emotions. The drama has always been markedly popular with the English-speaking peoples, and it seems, in a way, fitting that our "myriad-minded" one should place the mark of perpetuity on the play. The genius of Shakspeare compels us, whether we wish or not, to turn to the drama for the sublimest thoughts set forth in our language. For two centuries Shakspeare has held next to the Bible the place of honor in our homes. If every other book written by man were destroyed and Shakspeare remain, the student would yet have in his possession the means of a liberal education.

No entertainments at Notre Dame are so generously attended, or prove of such interest to the students, as the plays, invariably Shakspeare's, which are presented by the college dramatic organizations. Two or three plays are given each year; and any student, no matter what department he may be in, may take part in the presentation if he so wishes. The productions of the Carrollites are always interesting, for the talent some of these little men have for interpreting the dramatist's thoughts is often delightfully unexpected. During the last year they presented "The Comedy of Errors," and the enjoyment of the actors was fully equalled by that of the audience.

The University Dramatic Company presented during the scholastic year just closed "The Merchant of Venice." It was generally accepted as the most artistic presentation, from a dramatic point of view, ever given at Notre Dame.

The members of the company were drilled by the head of the department of elocution and oratory, and were thoroughly grounded in everything that goes to make dramatic work impressive and pleasing. All undergraduates are eligible to membership in the dramatic company, and the characters are assigned solely in the light of the students' abilities.

For the most part, students are members of the dramatic company during the time that Shakspeare's plays are being studied in the class-room. The union of class-room research with the attempt to give a line its intended meaning on the stage, fits a student for understanding Shakspeare as perhaps no other training could. The plays of the great dramatist are read during the junior and senior years in the course in arts and letters. The structure of different typical plays are carefully studied. The plot, characters, and expression are subjected to minute criticism, and critical opinions of value are read to aid the student in grasping the principles of the dramatist's art. As a result of this work, not only the student who is so fortunate as to belong to the dramatic organizations, but also most of the undergraduate part of the audience, bring to the play a familiarity with its construction, characters and history, that gives a peculiar enjoyment both to those interpreting the dramatist's lines on the stage, and to those in the audience following the development of the play.

PUBLIC SPEAKING.

Perhaps the greatest strides at the University during the last two years have been made in the department of public speaking. Under an efficient instructor special attention has been given to elocution, oratory and debating, and the results have been more than satisfactory. Debates have been held with other institutions, and in every instance the University debating team has won the contest.

The members of the class in elocution compete every year for the Barry Elocution Medal, and the fortunate student who wins is entitled to all the congratulations given him; for the contest is always close, sometimes being decided by a single point. Each contestant gives two selections, one humorous and one serious, and the judges mark their efforts carefully.

One of the honors especially prized by the upper classmen is the winning of the Breen Medal, a gold medal, awarded to the winner of the Annual Oratorical Contest. It is a mark

of real merit to win this honor; for unless a student's composition deserves the name oration, both in thought and in preliminary delivery, he is not permitted to go upon the stage. The preliminary work is in itself an experience that can not be overestimated. To choose a subject after long deliberation, to read all available articles touching on the subject chosen, to determine the specific phase to be expounded and emphasized, to write the oration in language fitting the subject and the treatment decided on, to arrange carefully the manner in which definition, explanation, proof, and refutation are to be introduced, to arrange the climax with rhetorical nicety—these details are in their working out no unimportant part of a liberal education.

After the oration is finished three copies are made, one of which is sent to each of three men who read it carefully and determine its merits in relation to those of the other orations handed in. The writers of the six or seven orations receiving the highest marks are eligible to enter the contest.

The oration delivered from the Washington Hall stage may be said to represent two or three months' arduous work; and although there can be but one successful contestant, as far as the medal is concerned, no student's time is ill-spent who enters such a contest—a contest of brains. Three judges mark the merits of the delivery and the general effect produced by the oration; and these marks, with those of the judges on thought and composition, are used to determine the rank of each orator.

No training perhaps in any department of the University is more beneficial, from a practical standpoint, than that afforded the members of the debating teams, and no honor is striven for with greater earnestness; for the men chosen to represent Notre Dame on these teams are, in the truest sense, the mental athletes of the college—the envied of all students. For if the loyalty and admiration of the student body is pledged to the members of the Varsity athletic teams, who represent the brawn and agility of the University, how much more is it given to the men who represent the intellectual acumen and versatility of the institution?

The method of choosing the members of the University debating teams is a simple one, and yet unquestionably the best one. The men chosen are the "survival of the fittest"—those who remain after the less able men

have been culled by exhaustive competition. The contest to choose the fittest representatives is open to any undergraduate student in the University. After a proposition has been chosen each candidate is assigned a side, negative or affirmative, which he must uphold against some opponent. The successful student is pitted against some other successful competitor in the preliminary trials, and this process is continued until only three men remain—each of whom has come through the entire contest undefeated,—and these men represent Notre Dame in the debate arranged with the students of some other institution.

Two debates were held during the year just closed, and the Notre Dame teams won both contests. The first debate was between members of the University Preparatory department and representatives of the South Bend High School. The second debate was between the University team and the representatives of the University of Indianapolis.

The question discussed in the first debate was: "Resolved, that strikes are productive of more harm than good to the working classes." Notre Dame had the affirmative and treated the question so broadly and so fairly,—granting every honest argument of their opponents, and yet setting forth so strongly the changing economic and social conditions that are present rebuttals of past labor policies,—that the judges' marks gave the victory to Notre Dame.

The great intellectual contest of the season was the debate with the University of Indianapolis. The question was: "Resolved, that the formation of trusts should be opposed by legislation." The University of Indianapolis team chose the negative. In spite of the fact that their opponents had the choice of sides, Notre Dame won—won by a unanimous decision. The months spent in exhaustive research and in preparing material, and the hours given to perfecting their addresses, had equipped the members of the Varsity team thoroughly in ideas and in manner of delivery, and they set forth a unified argument, complete in every essential, without annoying repetitions, and strengthened by weighty refutations of their opponents' propositions.

These are some of the forces present in the University, and not to be found in the Catalogue, that make for culture. Open to every student, appealing to his interest, his desire, or his ambition, something must be found that will broaden his mind and his sympathies.

In the Sanctuary.

It has been remarked that the past scholastic year was a signally prosperous one for Notre Dame, and that the evidences of this are various enough to satisfy persons of diversified tastes. While, therefore, recognition is taken of the fact that our athletic teams have been duly successful in their efforts, it is also to be observed that activity in the quieter pursuits of college life has been likewise productive of good results. On the one hand, much may be said of what has been done for the physical man; on the other hand,

with the most solemn ceremonies of the Church, the students naturally form an affection for things religious. It is but natural, also, that some should distinguish themselves in the service of the altar.

Chief among those who have characterized their stay at Notre Dame by taking an active interest in those things which pertain to the Sanctuary is Mr. James McGinnis. In the accompanying picture he is represented in the centre. As Master of Ceremonies during



the story of silent study in class-room or of successful debate on the public platform is a worthy record of what has been done for the intellectual man. Of the religious man, even though he be meek, a word may be fittingly said.

Such are the environments of the student at Notre Dame that to those influences essential to the life of any college is added the religious influence. Trained daily by those who look to the development of the Christian man, and having an opportunity of becoming familiar

the year, he had occasion to take charge of the altar boys and direct them during religious devotions. His strong, manly character, together with his faithfulness in attending to the service of the Sanctuary, gave him a high place of esteem among his fellow students. Another among our graduates, Mr. Joseph Shields, will likewise be remembered for his long and constant service at the altar.

Besides graduates there is, of course, a number of younger acolytes; so, as a matter of fact, the various halls of the University

are represented in this religious organization. Among these the Minims are by no means the least. With them is developed a spirit of zeal for the altar which in many a case becomes a badge of honor for life. Naturally, too, this should be the case. In their own hall they have a beautiful chapel where morning prayers are said, and where at times they have an opportunity of assisting at Solemn High Mass. On such occasions it is their privilege, in



JAMES H. MCGINNIS AND HIS AIDS.

assisting as acolytes, to take even the parts ordinarily reserved, in the college church, for the larger boys. Besides this the Minims have their own choir and pipe organ. In general, it may be said that the environments of the student at Notre Dame are conducive to his best interests, not only in things that pertain to the development of the mind and body, but also in matters that concern his soul.

Recreation Hours in Carroll Hall.

THOSE who are most interested in what pertains to athletics at Notre Dame, predict that in a very few years ours will be the distinction of ranking first in the discovery and development of first-class representatives of college sport.

While Gormley, Kerby, Richon and Malone were gaining distinction in Brownson Hall, several members of Carroll Hall were showing such skill in the various athletic games that it is only a matter of two or three years until they will be members of the Varsity.

Last fall the Carrollites were fortunate in the choice of a football captain, and gave emphasis to the truth that in union there is strength. The members of the team got along together in harmony, and as a result were so successful that they banded together in an organization called the "Preps."

A word of prophecy about the future of some of the promising athletes in Carroll

Hall: Grover Davis should be a star half-back in football and a good long distance runner. George Stich has only to make a choice out of several things which he can already do well; he gives promise of being an all-around athlete. These two and probably Reichardt, Riley, Strong, Mueller, Uckotter and Quinlan, should be on the Varsity Track Team two years hence. In baseball it would seem that McCambridge, Farabaugh, Hogan, Quinlan and Kelly have made the best showing during the past season.

By the time another year has gone by, the annalist of Notre Dame's athletics will have even a brighter story to tell of what the Carrollites have done. With such material to draw from, there is no reason why we should be second to any college in the country. The recreation hours at Notre Dame give splendid opportunity for the development of the best athletes in the land.

The Varsity and Their Work.

WHEN our 1900 Varsity ended their season by scoring a second decisive victory over the Michigan team, there was only one college nine in the West that could claim an equal standing with our men in the championship race. That team was Illinois. On the number of games played and on comparative scores Notre Dame has a shade the better of the dispute, but as this is a poor method of settling such questions, our men will have to be content to share honors with the *Illini*.

Using the same methods and the same basis of figuring out per cent. that is used by the National League teams, Notre Dame's victories in all her college games give her a percentage of 88.9. Seventeen college games with the strongest teams in the West were played, and of these seventeen Notre Dame won fifteen. The first game lost went to Purdue on our own grounds after ten innings of hard playing. We evened matters up with the Lafayette men by defeating them on their grounds a week later. The other game lost went to Beloit by the small score of 2-1.

Besides the college games played, the Varsity played several games with professional teams, thus making their schedule the heaviest in the history of Notre Dame. Manager Eggeman, who so successfully handled all affairs, lost no chances to secure a good game, and gave the patrons of his team a splendid opportunity to see baseball as it is played by the leading teams of the West.

During the winter and the early spring months the team was coached by Mr. Charles S. Stahl of the Boston National League Team. His services gave eminent satisfaction, and by the time he left, the players were rounding into fair form. After his departure the complete control of the team was given to Captain Angus McDonald who directed all their training. The Captain's ability as a player and the great confidence his men had in him kept them working splendidly, and their daily practice was as earnest and beneficial as though they were being directed by a highly salaried coach.

The mainstay of our team was the battery, Gibson and O'Neill. Gibson is known all through the West as one of the greatest twirlers that ever wore college colors, and the fact that he is now playing in the Big League is proof that those men that make a business

of hunting good players, have found it worth while to give our pitcher a trial. O'Neill behind the bat takes second place to no one. He manages to switch his glove around and hook on to the ball no matter where it goes or how much speed it has. Seldom does anyone steal a base on him, and in many games he came out with a clean record. The most satisfactory part of the whole thing with both O'Neill and Gibson is that in their class work they were always at the top. Both were exemplary students as well as star ball players. A short programme of the team is as follows:

ANGUS McDONALD, *Capt. and 1st Baseman*.

McDonald acted as Captain of the Varsity for the past two seasons, and it is safe to say that no man ever filled the office more creditably. He is an all-around athlete, and plays the clean gentlemanly game that makes a contestant popular with his opponents as well as with his supporters. As a player he won the hearts of all Notre Dame's rooters, and as captain he won the respect and confidence of the men under him. It is a great loss to Notre Dame to have him quit the game, as he is compelled to on account of the four-year rule.

NORWOOD GIBSON, *Pitcher*.

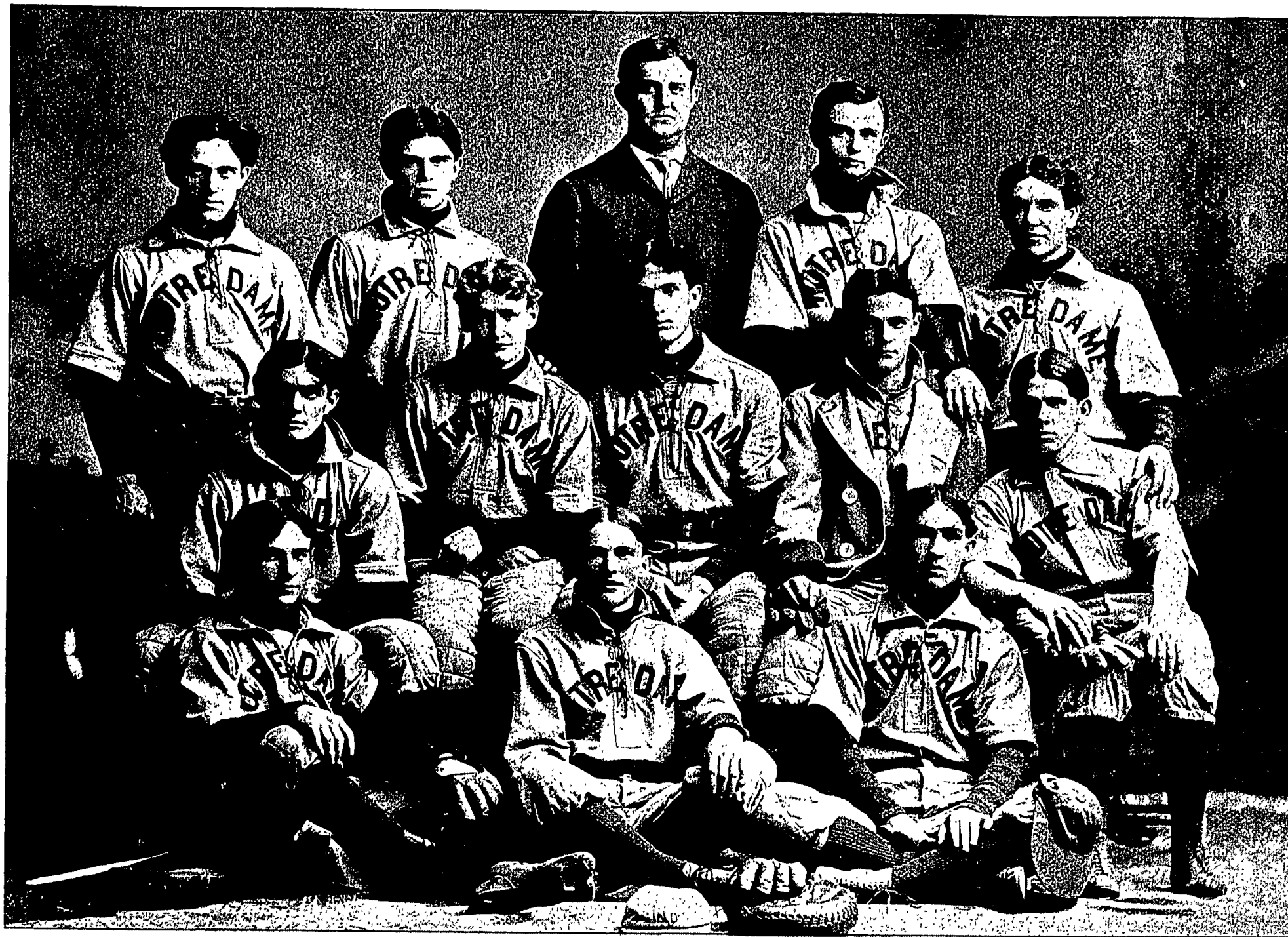
During the past four years every baseball fan in the West has read of "Gibby," Notre Dame's wonderful pitcher. All students will remember how they sat and watched game after game more because they wished to see him pitch than because they cared for the game. He was our mainstay for the four years that he played on the team, and when all others failed he was still in the game, cool, steady and effective. Notre Dame will play many a day before she has another student that can take "Gibby's" place.

BURT KEELEY, *Pitcher*.

A new figure, and that of a small man about Gibson's dimensions, fell into a Notre Dame uniform this year, and before the season opened had been doing such splendid work as to be appointed on our pitching corps. This was Burt Keeley. He pitched nearly a half of the season's games and closed the schedule with flying colors. He will undoubtedly hold the place in the hearts of next year's rooters that was held by Gibson this year. He is a cool, steady man in the box and is a slugger at the bat.

ARTHUR DREWES, *Pitcher*.

Another man on Notre Dame's pitching staff was Arthur Drewes. This is his first



N. D. U. BASEBALL TEAM.

season with the Varsity, but it will not be his last if he returns to the University. He has a deceptive delivery that fools most batters, has pretty good speed and fair control. He is not one of the surest hitters, but when he connects with the ball it usually goes far enough to give him three or four bases.

PHILIP B. O'NEILL, *Catcher*.

It takes a good man to fill the position behind the bat and handle the hot "ins" and "outs" that good pitchers usually pass toward the plate. We had a man this year in Mr. O'Neill that was the right man for the place. Phil stopped everything that came his way and a few more that didn't exactly come his way. In addition to this he stopped several men that tried to steal bases, and figured in many a neat double play. His batting was strong, and he is assured of a place on the team next year.

WILLIAM CAMPBELL, *Catcher*.

Notre Dame was fortunate this year in having Campbell for a man to replace O'Neill behind the bat. Although he did not play in many of the games, he was considered a reliable man, and his work in the games in which he took part justified the confidence that was placed in him. He is quick, is a good thrower and bats well.

CHARLES E. DALY, *Second Baseman*.

The man that covered the most ground with the least difficulty was Daly, our fleet little second baseman. Before the season opened the fans were at a loss to know who would fill the position, and were fearful lest it should prove the weak spot in the team. After Daly played his first game it was all off. He secured two clean hits and played an errorless field. This pace was maintained all through the season, and it was a sure thing when balls went towards Daly that the batter would be out. This was his first year on the team.

JAMES MORGAN, *Third Baseman*.

This year Morgan wore a Varsity suit for the first time, and wore it with credit all through the season. Though lacking in experience he played a steady game at the third bag, and was remarkable for his accurate throwing. In the early part of the season he started in to hit the ball pretty regularly and kept up this habit all through. The season's experience will make him a very valuable man for next year's team.

ROBERT LYNCH, *Short Stop*.

An old standby and a heavy hitter is little "Bobby Lynch," who played his second season as short stop. It was an off day when an error was put down in his column, and when a safe hit or a sacrifice was needed he was the man to get it. He covers a great deal of territory, and is always on hand to back up second or third. He is a fixture on the Notre Dame team.

CHARLES F. FLEMING, *Left Fielder*.

There wasn't any man playing baseball this year that made a record to beat that of "Chuck" Fleming, Notre Dame's great fielder. All during the season opposing batters kept sending liners and sky-scrapers into his territory, and every time "Chuck" pulled them in. Only one error was marked against him in the whole season. It is a misfortune for Notre Dame that the four year rule bars him from playing any more under her colors. Nobody will ever stand in left field that can fill that position better than he and few will beat him at handling the bat.

MATTHEW DONAHOE, *Centre Fielder*.

In the next yard to Fleming played little Donahoe, a man that was almost on the same footing with Fleming at catching a ball, and was easily the greatest base runner on the team. He was a sure hard hitter and a general all-around man that can fill an in or an outfield position. He played his second season on the team, and in recognition of his faithful service and his accurate knowledge of the game, he is elected to captain next year's Varsity.

JOHN FARLEY, *Right Fielder*.

Farley, captain of next season's football team, played his second year on the Varsity nine and was placed in right field. Although not so sure a fielder as Fleming or Donahoe he was a heavy batter and a fast base runner. He was a cool, steady player, and his failure to capture some of the flies sent into his territory seemed to be more because of misjudgment than anything else.

* * *

This much for the men that placed us at the top of Western college ball teams this season. May those of them that return be fortunate enough to have the honor of being Varsity men next year, and for the rest may the same success that attended the closing days of their baseball career follow them wherever they go!

PAUL J. RAGAN.

The Varsity Track Team.

THE Track season of 1900 was one of victories and defeats for Notre Dame. But the students of the University, now scattered over this hemisphere will sound the praises of the track men that did so much to place the name of Notre Dame in the foreground of Western athletics. The season presented a series of unfortunate accidents that lost to the team the services of some of the best men; but withal the work was uniformly good.

The record of the year embraces six meets, in all of which Notre Dame was respected for her worth. The first meet of the season was the Indoor Championship at Milwaukee, when the relay team, composed of Corcoran, M. O'Shaughnessy, Murray and Herbert, was pitted against the Champion Chicago University team. A banner was the trophy for this event, and the quartet of men from Notre Dame carried away the championship banner. In addition to winning the relay race Captain Corcoran won the 75-yard dash in record time.

The second meet of the year was the Triangular Meet at Notre Dame with the Universities of Illinois and Chicago. The final score showed Chicago, first; Notre Dame, second; Illinois, third.

The Meet at Michigan was a nightmare in many respects. The less said about it the better, for it cost the services of Corcoran for the balance of the season. The Indiana State Meets, of which there were two, were both won by Notre Dame in hollow fashion.

The Tri-Collegiate Meet at the opening of Cartier Field was the only opportunity the students had to see the men in outdoor work.

The last meet of the year was the Western Intercollegiate at Chicago when Notre Dame won fifth place, and that with a crippled team. Corcoran, the star sprinter, was unable to compete because of injuries received early in the season. Eggeman had a wounded ankle and was out of it, and Connor was sick, although he went into the race. The point winners in the Western Intercollegiate were O'Shaughnessy, third in the 100-yard dash; Pick, second in the quarter mile run; Gaffney, first in the mile and quarter mile bicycle races; McDougall, second in the mile bicycle race.

The Track Athletes that wore the monogram this year were: Captain Corcoran, Eggeman, Connor, Gaffney, O'Shaughnessy, McDougall, Sullivan, Herbert, Edward Pick, John Pick,

O'Brien, Thomas Murray, Steele and Wagner.

In the number of individual points scored, Captain Corcoran easily led the team. This is his first year as captain and his third year on the team. He began his work in athletics as a quarter and half mile runner. In the quarter mile he is the fastest in the West, but this event he let take care of itself, and trained only for the sprints.

In the beginning of the indoor season he won the Western 75-yard championship in world's record time; but from that time on the hoodoo was against him, and he was forced to enter his races without having any training. An injured muscle kept him from working. Throughout the season he was beaten only three times, and then by the merest scratch. He was one of the men that won the Championship Relay Race, and it was by his wonderful running in the last relay that Notre Dame won out.

Eggeman, the giant of the team, was second in points. His work with the shot and hammer was an improvement over last year. But the hoodoo that seemed to hang over the heads of our men, kept him at home from the Western Intercollegiate with a sprained ankle. This is Eggeman's third year on the team.

Connor has been on the track team for two years. This year his work was much better than before. He ran the half mile and the mile. On several occasions his time for either of these was remarkably fast. He has been the mainstay of the team in the distance runs. He is one of the gamest men that has ever competed in athletics for Notre Dame.

Gaffney showed again this year that he was the fastest quarter mile bicycle rider in the West. The critics who credited his winning last year to his good start received the same disappointment again this year. Gaffney wins his races with phenomenal sprint. He has been on the team two years.

O'Shaughnessy's improvement over last year's work gave him a place among Notre Dame's sprinters. In the short distances he ranked second to Captain Corcoran on the team. He has been on the Varsity three years.

McDougall was a new man on the team, but his clever head work in the bicycle races more than once brought points to Notre Dame. He was a strong distance rider, and in the races he always worked with his teammates for the interest of the team alone.

Sullivan was a novice in athletics; but through his indefatigable work he became a



VARSITY TRACK TEAM.

sure point winner. His work in the pole vault was such as would do credit to one with more than a few months' experience. He also did some very creditable work in the broad and high jumps.

Herbert through a misfortune did not score as many points as he did last year. He competed with faster men this year than ever before, and the advantage that the best had over him was small. This year he was a member of the relay team. But aside from that his work was confined solely to the hurdles. He has been on the Varsity three years.

Edward and John Pick, the only brothers on the team, were new men on the Varsity. The discus throw being their strongest event, always went between them as a toss up. "Eddie" was one of the strongest quarter mile men on the team. John specialized with the discus, and his work through the season was exceptionally good.

O'Brien was almost a utility man. He could be relied upon for any distance up to the quarter mile. He was one of the headiest runners on the team. Although he was not as strong a point winner as some of the men, his clever team work on several occasions has won points for others. This is his second year on the team.

Murray and Steele were among those who lost favor with the hoodoo, and by injuries received in the early part of the season their bright prospects were lost. Murray ran on the relay team during the indoor season and did speedy work, but an injured muscle put him back when the outdoor season began. Steele was destined to follow in the footprints of the famous Deer-Foot. But a break down during the early season forced him to quit.

Wagner was a novice in the weight events, but he pulled up so near to the leaders in

the hammer throw that all consider his prospects bright. In the discus also his work was good. This was his first year on the team.

Gormley was a youngster in track athletics, and did not have the advantages of the early season's work. His work in the half mile was good considering the short time that he had to prepare for the meets he entered.

Wathen was the third man of the bicycle squad; although he won no points for the team he was a reliable man and gave promise of becoming a fast rider.

Butler competed in only one meet, that at Notre Dame in March. He ran in the mile and half mile; he did not score, but rendered valuable assistance to his team-mate, Steele, in winning the half mile.

The year's work reflects great credit on Trainer Engledrum who had charge of the men. He was an indefatigable worker and succeeded in bringing out some youngsters that will make their names prominent in Western athletics. Trainer Engledrum's position is a difficult one to fill, and he not only did his work well, but he had the good will of every man on the team. Succeeding years should see Notre Dame in a more advanced position, for nowhere are there better facilities for training.

The big gymnasium, with its dirt track, gives abundant opportunities for early season work, and Cartier Field with its magnificent track and straightaway, is unequalled in the entire country. Inter-hall meets, such as were held last year, should be kept up, for it is that work alone that develops the latent prowess of the men and gives the coach a chance to see what the boys are capable of doing. There should be thirty men on the track team instead of fifteen, and it is to be hoped that next year the boys will go into the sport with more earnestness.

A Retrospect.

THE theory of evolution could not be applied to anything with greater precision than to our boat crews when we compare the three winning crews of last June to those of the sixties. Then the students rowed because rowing was a manly sport and two beautiful lakes lay close to them. The men, then, were equally as strong as those of to-day; but with the boats, as Rudyard Kipling says, it was another story.

"See how clean cut their stroke is!" said

an old Notre Dame man to me last Commencement, as we were watching the Senior crew in the last stretch. "In '68, when the *Pinta* and *Santa Maria* were launched, we thought them models of grace and symmetry, but they were but tubs when compared to the boats out yonder. They were six-oared, like those, but had no sliding seats. The boys pulled lustily then, but not with the same uniformity of stroke which these men display."

Times have certainly changed and our boat

races with them. The old Notre Dame man can see a difference between the yawls of the sixties and the racers of this day, between the crews of the sixties and the crews of this day. Then they boasted of no training tables, no expert captain to coach them, no modern shells to row in—and when the race was over the men came in wet to the skin.

Before the advent of the *Santa Maria* and *Pinta*, a large yawl lay in St. Joseph's Lake, and this the students called the *Tub*. Father Tim O'Sullivan has often related the trip the band took across the lake in the fifties,—the

places with the sixth oar, and the *Santa Maria* laid claim to the race on a foul. But Father Lemonnier decided that the crews should contest again. The chronicler of that day says "the *Pinta*, this time, won the race, and we are happy to say the umpires were not forced to take notice of any points outside of the rowing."

Where the ice-house stood, the first boat-house was built to receive the boats. It was not a large one, nor could it compare in architectural beauty with the present one. On it a stand had been placed, and here the



SENIOR WINNING CREW.

rocking of the *Tub*, and the consequent loss of their musical instruments. "And," added Father Tim with a knowing wink, "the fishes were tooting on our horns for many a day after."

The *Tub* grew unseaworthy from rough usage, and it was succeeded by the *Santa Maria* and *Pinta*—these, as far as speed and weight were concerned, bore a family resemblance to their worthy namesakes. The first race took place in '69 or '70. After the last turn had been made the coxswain of the *Pinta* changed

band played their melodies while the race was in progress.

When we compare the past with the present in boat racing we must grow hopeful of the future. The time is not far distant when we shall connect our lakes by two canals; when we shall make a boat course which any college in the country would feel flattered to claim. Then shall we extend an invitation to the colleges of the West to row with us—to compete with a crew that is lacking neither in skill nor in brawn.

J. J. S.